

Statement of

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“Wireless Innovation and Consumer Protection”

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Thank you Mr. Chairman, Mr. Upton, and members of the Committee.

For the last decade, the Congress and two administrations have been working to try and improve and promote the nation’s wireless markets. In many respects that period has witnessed many great successes. Spurred by the opening of spectrum, cell phones are today widespread, attractive in appearance, and available in a variety of styles. Prices for service, at an average of about \$600 per year, could be cheaper, but could be worse. There have even been unexpected policy success stories, like the unpredicted takeoff of WiFi that followed the unheralded creation of unlicensed spectrum by the FCC.

Nonetheless, you can talk to any American for a few minutes and you’ll realize the task is not finished. People don’t like the fact that they’re locked into lengthy contracts with tricky billing plans, they don’t like the limited selection of phones available in the United States, and they don’t like fact that you can’t take your phone with you when you change carriers. This tells us that while the “first generation” of wireless device policy has succeeded in its main task, the wide dissemination of mobile phone technologies, there is still work to do. As popular sentiment makes clear, the second generation of policy must take its goal increasing consumer welfare and opening the market to greater product diversity and innovation in the wireless markets.

One of the side effects of our chosen policies has been the creation and enfranchisement of a spectrum-based oligopoly—two dominant firms, and four total—that exercises great power over the wireless economy. That this has happened is not surprising. Telecommunications markets of all kinds have a well-known tendency toward monopoly and consolidation, and not necessarily for bad reasons: large carriers can be more efficient and give better coverage. But that natural tendency toward a monopoly on the

nation's airwaves means that Congress and the Administration must retain oversight. Congress and the FCC must also take measures, when necessary, to ensure that the trustee's of the nation's spectrum serve the public's interests.

"Wireless Carterfone" is a phrase used to describe the second generation of wireless policy. That term comes from the famous *Carterfone* case that established what turned out to be landmark right in telecommunications law – the right to attach any safe device to a phone line. It is in the spirit of *Carterfone* that the present suggestions for the wireless industry are offered.

As of yet, what "Wireless Carterfone" should mean has not been made as clear as might be ideal. Today I want to explain more precisely what Wireless Carterfone means. I want to spend most of my time trying to explain two simple rules– the need for "device portability rules," and a "ban on blocking." These are two bedrock rules that can help fulfill the potential of the wireless markets.

1. *Device Portability Rules*

Since 2003, consumers have benefited from rules called "number portability rules" that let you take your phone number from one carrier to another when you switch carriers. For example, I have personally had the same cell phone number since 1999, a 202 number that I got while working here in Washington. When I've switched carriers, the number follows along. It's a convenience, of course, but it also helps feed competition between the carriers, by making sure that fear of losing your number is no bar to leaving your carrier. Of course, unfortunately, what really prevents people from switching carriers are the contract termination fees, but more on that below.

But there's an anomaly in today's system. While you get to keep your number, you don't have any right to keep your *phone*, no matter how much you like it, paid for it, or how expensive it was. That's most obvious with the new iPhone, which, even though it costs \$500 or more, becomes an expensive paperweight if you decide you want to leave AT&T. It, and many other phones, are "locked" to a single carrier. In addition, even if you go out and buy a phone you like, or have one given to you, you often cannot get the carrier to activate it on their network.

This state of affairs is very different than what we see in most consumer electronics markets. Imagine buying a television that stopped working if you decided to switch to satellite. Or a toaster that died if you switched from Potomac Power to ConEd. You'd be outraged – for when you

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buy something, that usually means you own it. But its not quite so when it comes to wireless devices.

Why are things this way? Some, though only some, is technological. Some carriers use different technical standards, making device portability sometimes impossible. But on the business side, for carriers, there are two major reasons for locking and blocking. The first is to help keep switching costs high, to prevent consumers from leaving for a competitor, and maintaining control over as many potential revenue streams as possible. If the consumer could easily buy a phone and then activate it, she'd have no need to sign a two-year contract with termination fees, making it much easier to leave if service turns out to be bad. In addition, "independent" phones might carry features that the carriers might want to block, like VoIP or media downloads not controlled by the carriers. The prospect of either of these outcomes leads to the two least attractive carrier practices: locking and blocking.

For consumers, I think some of the drawbacks of the current situation are obvious. Thanks in part (though not in whole) to these practices, most consumers are in a two-year plan of some kind with a phone provided by the carrier. For some consumers that's fine, because they take the two-year contract as a fair deal for the lower price they paid up front for their phone. But not everyone. Many consumers have their own phone they'd like to use, and would prefer to avoid a "buy now-pay later" contract. In addition, consumers suffer in terms of product diversity. Of the dozens of Nokia phones introduced every year, for example only a handful are "approved" and make it to U.S. customers. In the United States, it is difficult to get your hands on the variety of phones available in Europe and Asia, much less get them activated.

Beyond these consumer issues, lack of device portability has broad and important effects on innovation in wireless markets. The need to get permission before activation, coupled with a strong control over retail had made the existing oligopoly the gatekeepers of market entry in wireless. Entrepreneurs and even well established firms need get "approval" before bringing a phone to market.

That kind of control over market entry is the opposite of what we find in the markets where the U.S. high-tech industry is a world leader. Low cost market entry, while it sounds like economic jargon, has been the magic behind the internet, software, and computer revolutions, where anyone and a good garage might start a company. In much earlier times, arguably the relative ease of market entry in markets like agriculture in the 19th century is part of what has made the American economy different. But the wireless

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markets are the opposite: they are high entry cost markets at every level. The goal of the second generation of wireless policy should be to change that.

The consequence of controlled market entry is that many innovative but unknown companies have extraordinary difficulty getting to market at all. Things could be worse – its not quite the 1960s, when any telecommunications innovation had to go through the AT&T bottleneck. But when the criteria for market entry is “fit” with the plans of the major carriers, innovation is inevitably distorted. And since innovation and economic growth are so closely linked, this affects us all.

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There are no easy or quick answers to the problems of excessive gatekeeper power and high costs of market entry in a telecommunications market. But big things can come out of small beginnings, and in the wireless markets a crucial matter are what can be called “device portability rules,” a variation on the number portability rules. In outline form such rules say that:

- (1) All mobile carriers must activate any device that the consumer wishes to activate and use on their network, provided that the device is
 - (a) technologically compatible with the network,
 - (b) does no harm to the network,
 - (c) does not violate any law in its intended usage, and
 - (d) can be billed for data and voice on the basis of usage.
- (2) All mobile carriers are prohibited from selling telephones that are purposely disabled, locked or rendered incapable from operating on more than one carrier, whether through a SIM lock or any other mechanism.

These are small rules that may require some changes in the way companies do business, but are certainly very easy rules to follow. In fact, some of the weaker carriers like T-Mobile already follow these rules in part. At the very least what’s required is less than was required for number portability. However, the long term influence of these rules would be broad indeed. They would usher in greater consumer choice; but more profoundly, would usher in an age of innovation on wireless networks in ways both predictable and not.

2. Banning Blocking

In Congressional testimony on the issue of “network neutrality,” both in the House and Senate, representatives of the telephone and cable industries have repeatedly declared that they “will not block or degrade traffic, period.” That promise, to the credit of the industries, has been kept to this date, and it has been important to ensuring the health of the broadband internet.

Unfortunately, in the wireless markets, blocking and degrading are not only a possibility, they are a regular practice. While full documentation of this problem is beyond the scope of this testimony, we might look as an example at the dataplan that AT&T requires of users of the Apple iPhone.

That plan, which governs the use of AT&T’s data network, blocks (in capitals) the phone

“FOR VOICE OVER IP, ... [and] FOR UPLOADING,
DOWNLOADING, OR STREAMING VIDEO CONTENT (E.G.
MOVIES, TV) MUSIC OR GAMES.”

The degree to which these restrictions are enforced is not yet clear. Yet such bans on what consumers can do with their iPhones seem very far from the consumers’ interests. And, as I have shown in other work, these are other blocks on the uses that wireless devices can be put are commonplace.

The problem with blocking on wireless mobile data networks is precisely the same problem on broadband networks. Its what led the industry to promise “no blocking” – it amounts to a serious distortion of markets that depend on the mobile network as a platform.

To counter the problem of blocking, I outline the following rule:

- (1) No carrier shall block the use of any application or content on its wireless networks, unless necessary for
 - (a) enforcement of applicable law,
 - (b) the prevention of bonafide threats to the security of the network.

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There will, of course, be opposition to both of these suggested rules, and let me speak briefly to that.

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First, some might think that the phone “subsidy”—the discounts available on most cell phones—means that carriers have the right to do whatever they want. Don’t be fooled: a phone “subsidy” is simply a buy now, pay later program. The full price of the phone is collected in higher monthly rates. So whatever the consumer may pay at first, the telephones are never a gift. The consumer pays in full for the phone he or she owns, and that phone is his property.

Second, some will argue that device portability rules will endanger the quality or security of the network. While no one doubts the importance of these issues, these arguments are generally red herrings. They are precisely the argument that the old AT&T made for decades through the 1970s to defend its rule denying consumers the right to attach telephones to its network.

Notice that we don’t prevent consumers from hooking up the televisions or radios of their choice on the argument that they might install a “low quality” devices. In the end, consumers do not need phone companies to “protect” them from “bad” cell phones. They can make the choice on their own. And when they have that freedom, we will all be better off.